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Directorate F: Social Statistics  
Unit F-3: Labour market statistics and lifelong learning



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**WORKING GROUP  
LABOUR MARKET STATISTICS**

**Document for item 2.3 of the agenda**

**SES2018: IMPLEMENTING ARRANGEMENTS**

**10-11 October 2017  
AMPERE Building  
Luxembourg**

*Summary: the aim of this document is to prepare for the next transmission of SES2018 data whose implementing document is provided in annex.*

## 1. Structure of Earnings Survey 2018

According to regulation Article 9 of the Council Regulation 530/1999, the next transmission of Structure of Earnings data will concern reference year 2018 and should be transmitted before **30 June 2020**.

Meeting this deadline is crucial for Eurostat to publish data with a reasonable timeliness. In view of this, countries expecting any serious problems or that may not be able to send good quality data on time are invited to contact Eurostat as soon as possible.

The next step will be to update the SES metadata through ESS-MH when the SES 2018 quality reports are due, namely before **31 December 2020**.

## 2. Changes in SES2018 compared with SES2014

The classifications used in SES transmission are: NUTS, ISCED, ISCO and NACE.

Among those classifications, only the NUTS will be modified compared to the SES2014 exercise. The new version bears changes in nine countries: Germany, Netherlands, Finland, Poland, France, Hungary, Ireland, Lithuania and the UK (in all 3 NUTS levels). As concerns NUTS 1 level, applied in SES, changes affect only France and Poland. The following table presents the changes:

| NUTS 2013   |               |                           | NUTS 2016   |               |  |
|-------------|---------------|---------------------------|-------------|---------------|--|
| NUTS-1 CODE | COUNTRY LABEL | NUTS-1 LEVEL REGION LABEL | NUTS-1 CODE | COUNTRY LABEL | NUTS-1 LEVEL REGION LABEL                      |
| FR          | FRANCE        |                           | FR          | FRANCE        |  |
| FR1         |               | ÎLE DE FRANCE             | FR1         |               | ÎLE-DE-FRANCE                                  |
| FR2         |               | BASSIN PARISIEN           | FRB         |               | CENTRE-VAL DE LOIRE                            |
| FR3         |               | NORD - PAS-DE-CALAIS      | FRC         |               | BOURGOGNE- FRANCHE-COMTÉ                       |
| FR4         |               | EST                       | FRD         |               | NORMANDIE                                      |
| FR5         |               | OUEST                     | FRE         |               | NORD-PAS-DE- CALAIS-PICARDIE                   |
| FR6         |               | SUD-OUEST                 | FRF         |               | ALSACE- CHAMPAGNE-ARDENNE- LORRAINE            |
| FR7         |               | CENTRE-EST                | FRG         |               | PAYS-DE-LA-LOIRE                               |
| FR8         |               | MÉDITERRANÉE              | FRH         |               | BRETAGNE                                       |
| FRA         |               | DÉPARTEMENTS D'OUTRE-MER  | FRI         |               | AQUITAINE- LIMOUSIN-POITOU-CHARENTES           |
|             |               |                           | FRJ         |               | LANGUEDOC-ROUSSILLON-MIDI-PYRÉNÉES             |
|             |               |                           | FRK         |               | AUVERGNE- RHÔNE-ALPES                          |
|             |               |                           | FRL         |               | PROVENCE-ALPES-CÔTE D'AZUR                     |
|             |               |                           | FRM         |               | CORSE  |
|             |               |                           | FRY         |               | RUP FR — RÉGIONS ULTRAPÉRIPHÉRIQUES FRANÇAISES |

| NUTS 2013   |               |                           | NUTS 2016   |               |                                     |
|-------------|---------------|---------------------------|-------------|---------------|-------------------------------------|
| NUTS-1 CODE | COUNTRY LABEL | NUTS-1 LEVEL REGION LABEL | NUTS-1 CODE | COUNTRY LABEL | NUTS-1 LEVEL REGION LABEL           |
| PL          | POLSKA        |                           | PL          | POLSKA        |                                     |
| PL1         |               | CENTRALNY                 | PL2         |               | MAKROREGION POŁUDNIOWY              |
| PL2         |               | POLUDNIOWY                | PL4         |               | MAKROREGION PÓŁNOCNO-ZACHODNI       |
| PL3         |               | WSCHODNI                  | PL5         |               | MAKROREGION POŁUDNIOWO-ZACHODNI     |
| PL4         |               | POLNOCNO-ZACHODNI         | PL6         |               | MAKROREGION PÓŁNOCNY                |
| PL5         |               | POLUDNIOWO-ZACHODNI       | PL7         |               | MAKROREGION CENTRALNY               |
| PL6         |               | POLNOCNY                  | PL8         |               | MAKROREGION WSCHODNI                |
|             |               |                           | PL9         |               | MAKROREGION WOJEWÓDZTWO MAZOWIECKIE |

In the context of adjusting the Gender Pay Gap (see document 23 – Item 2.2), it was not possible to correct for the total length of working experience of an employee, in case he/she had several employers during his/her career. Indeed, SES only collects data on the length of service in the surveyed enterprise.

It is therefore proposed to ask LAMAS if any countries would volunteer to collect and transmit this new variable, on an optional basis.

### 3. Implementing document

The Annex to this document contains the implementing document to be followed by the NSIs for the data processing, validation and transmission of the next vintage of Structure of Earnings Survey, reference year 2018.

In terms of validation, there is no change compared with the SES2014 exercise. As for SES2014, Eurostat will run additional statistical checks to detect outliers such as hourly earnings below 1/50<sup>th</sup> of the median earnings or more than 50 times higher, for the country concerned.

### 4. Proposal

**LAMAS is invited:**

- To prepare for the transmission of SES2018 data that is due on 30 June 2020;
- To take note of the SES2018 implementing arrangements provided in annex;
- To volunteer for testing a new (optional) variable on the total length of working experience.



EUROPEAN COMMISSION  
EUROSTAT

Directorate F: Social statistics  
Unit F3: Labour market statistics

# **Structure of Earnings Survey 2018**

**Eurostat's arrangements for implementing the  
Council Regulation 530/1999,  
the Commission Regulations 1916/2000 and  
1738/2005**

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# **1 General Remarks**

## **1.1 Objective of the SES 2018**

### **1.1.1 Objective of the survey**

The Structure of Earnings Survey (SES) for reference year 2018 is the fifth in a series of four-yearly earnings surveys to be conducted under the Council Regulation 530/1999 and the Commission Regulation 1916/2000 as amended by Commission regulation 1738/2005. The links to the Regulations related to the SES are available in Annex 2 of this document.

The objective of this legislation is to provide accurate and harmonised data on earnings in EU Member States and Candidate Countries, for policy-making and research purposes. The 2018 SES will give detailed and comparable information on relationships between the level of remuneration, individual characteristics of employees (sex, age, occupation, length of service, highest educational level attained, etc.) and their employer (economic activity and geographic location of the local unit ; size of the enterprise).

The SES collects the earnings actually received by an employee of a business in the reference month and year. The information collected relates to the earnings paid to each "job holder". It does not cover earnings by the same employee elsewhere in a second or third job.

### **1.1.2 Data sources and reference period**

Data for the 2018 SES can be collected from tailored questionnaires, existing surveys, administrative sources or a combination of such sources, which provide the equivalent information. While accepting a degree of flexibility in the means employed for collecting the survey data, the information obtained must be of acceptable quality and comparable between European countries.

The reference year is 2018. For most countries, the financial year corresponds to the calendar year. In some countries, however, the accounting year does not necessarily coincide with the calendar year and therefore for these countries the financial year which gives the best match with the calendar year 2018 should be used.

The reference month is October for the majority of the countries, this being the month which is assumed to be least affected by absences related to annual leave or public holidays. The choice of another month is acceptable if the month can be justified as being representative.

## **1.2 Sampling design: a two-stage sample**

The 2018 SES is usually based on a sample of employees drawn from a stratified sample of local units. For each individual employee, characteristics (e.g. sex, age, occupation, etc.) and remuneration received (hourly, monthly and annual earnings, etc.) are collected together with information about the local unit (e.g. region, economic activity, etc.). The collection of microdata at the local unit level instead of enterprise level is necessary in order to provide results at the NUTS 1 level. For enterprises without decentralised activities, the distinction between local unit and enterprise is superfluous.

The reporting unit (local unit or enterprise) fills out a questionnaire and provides the information to be collected. When the enterprise reports, it shall give information concerning the local unit where the individual employee works.

The sampling procedure used for the SES contains usually two stages. In the first stage, a stratified random sample of local units is drawn. Stratification criteria used by the countries may include economic activity (at 2-digit level of NACE Rev.2), the number of employees in the enterprise to which the local unit belongs and the region (at NUTS 1 level). For some countries, the latter coincides with the national level. For the second stage, a simple random sample of employees is usually taken within each of the selected local units. Where stratification is carried out, the criteria used could include e.g. sex, full-timer or part-timer, and occupation.

## **1.3 Scope of the survey**

### **1.3.1 Economic activities covered**

The statistics of the 2018 SES refer to enterprises with at least 10 employees in the areas of economic activity defined by sections B to S excluding O of NACE Rev.2. The inclusion of section O, as well as information on enterprises with fewer than 10 employees remains optional in the 2018 SES.

### **1.3.2 Population and sample of employees to be covered**

The SES collects data both for the reference year 2018 and the reference month of October (in the majority of countries). The population of employees to be targeted for the SES are those employed, which have an employment contract in the observation unit in the reference month.

Employees are all persons, irrespective of their nationality or the length of their working time in the country, who have a direct employment contract with the enterprise or local unit (whether the agreement is formal or informal) and receive remuneration, irrespective of the type of work performed, the number of hours worked (full-time or part-time) and the duration of the contract (fixed or indefinite). The remuneration of employees can take the form of wages and salaries including bonuses pay for piecework and shift work, allowances (e.g. for leaves not taken), fees, tips and gratuities, commission and remuneration in kind.

The employees to be included in the 2018 SES sample are those who actually received remuneration during the reference month. **Employees who did not receive remuneration in the reference month should be excluded.**

For sampled employees who have period(s) of unpaid absence during the reference month, their earnings should be adjusted on to a full month's basis. Where it is not feasible to adjust their monthly earnings, then such employees should be excluded from the sample.

### **1.3.3 Categories of workers which are to be included in the SES**

The following list gives examples of categories of employees that are included:

- sales representatives, providing they are on the payroll and receive other forms of remuneration in addition to any commission,
- paid working proprietors,
- apprentices,
- students and trainees (articled clerks, student nurses, research or teaching assistants, hospital interns, etc.) who have a formal commitment to contribute to the unit's production process in return for remuneration and (or) education services,
- disabled workers, provided the formal or informal relationship of employer to employee exists whereby the person works for the enterprise in return for remuneration in cash or in kind,
- people carrying out remunerated productive activity under employment programs engaged by an employer under a contract of employment,
- interim or temporary workers (e.g. secretarial staff) recruited, employed and remunerated by employment agencies to work elsewhere, often for temporary periods (persons employed by temporary employment agencies, who are to be included in the industry of the agency which employs them, and not in the industry of the enterprise for which they actually work),
- seasonal and occasional workers, if they have a formal or informal agreement with the enterprise or local unit and pre-defined working hours,
- employees for whom labour costs were incurred in the reference period but who were temporarily not at work because of illness or injury, holiday or vacation, strike or lock-out, educational or training leave, maternity or parental leave, reduced economic activity, suspension of work due to bad weather, mechanical breakdowns, lack of materials, fuels or power, or other temporary absence with or without leave,
- those working abroad if they continue to receive remuneration from the reporting unit,
- civil servants and other government employees whose terms and conditions of employment are laid down by public law,
- the armed forces, consisting of those who have enlisted for both long and short engagements and also conscripts (including conscripts working for civil purposes),



- ministers of religion, if they are paid directly by general government or a non-profit institution,
- outworkers<sup>1</sup>, including home workers and tele-workers if there is an explicit agreement that such workers are remunerated on the basis of the work done: that is, the amount of labour which is contributed as an input into some process of production.

#### **1.3.4 Categories of workers which are excluded from the SES**

- sales representatives and other persons who are wholly remunerated by way of fees or commission, are not on the payroll, or are self-employed,
- owners, directors or managers whose remuneration wholly takes the form of a share in profits,
- family workers who are not employees (as defined above) of the enterprise or local unit,
- own-account workers,
- unpaid voluntary workers (e.g. those who typically work for non-profit institutions such as charities).

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<sup>1</sup> An outworker is a person who agrees to work for a particular enterprise or to supply a certain quantity of goods or services to a particular enterprise by prior arrangement or contract with that enterprise, but whose place of work is not within it.

## 2 INFORMATION REQUESTED IN REGULATION 1738/2005

Annexes I and II of Regulation 1738/2005 list and define the variables for which data is required.

The information presented in this chapter is broken into five sections (2.1 to 2.5), corresponding to the following five blocks of variables specified in Regulation 1738/2005:

- Information relating to the local unit to which the employees are attached
- Information relating to each employee in the sample
- Information about working periods
- Information concerning earnings
- Grossing-up factors

The variable numbers below correspond to those listed in Regulation 1738/2005. Variables in *italics* highlight the items which are *optional*.

### Mandatory variables

It is essential that Eurostat receives **complete information for each employee for all mandatory variables**. Eurostat cannot accept microdata records from a country if there is missing data for any of the mandatory variables, as this affects the grossing-up factors.

### *Optional variables*

Clearly, not all optional variables will be supplied by all countries. Eurostat will make use of the data supplied, but obviously it is preferred that data should be provided (as for mandatory variables) for all observation units and employees.

## **2.1 Information about the local unit to which the sampled employees are attached**

Annex 1 gives the codes for the alpha-numeric variables in this section.

### **(Variable 1.1) Geographical location of the statistical unit (local unit) (NUTS-1)**

The region in which the statistical or local unit is located should be classified according to the nomenclature of territorial statistical units (NUTS, level 1)<sup>2</sup>.

Each region should be classified according to the nomenclature of territorial statistical units (NUTS), level 1. Every Member State is obliged to deliver data at NUTS 1 level, as provided in Annex 1.

### **(Variable 1.2) Size of the enterprise to which the local unit belongs**

The size of the enterprise (in terms of number of employees) should be assigned to one of the following bands: *1-9 (optional)*, 10-49, 50-249, 250-499, 500-999, 1000 and more employees.

### **(Variable 1.3) Principal economic activity of the local unit (NACE Rev.2)**

The main economic activity should be coded at the 2-digit level of the Statistical Classification of Economic Activities in the European Community (NACE Rev.2) for sections B to S. *NACE section O remains optional* for the 2018 SES.

### **(Variable 1.4) Form of economic and financial control of the enterprise**

The financial control of the enterprise should be coded as one of the following:

- public control (public ownership is more than 50%),
- private control (private ownership is more than 50%).

Balanced public and private ownership (50/50 ‘shared control’) is very rare in practice. Therefore, such cases will not be coded separately and should, if they occur, be treated as being under ‘private control’.

It should be remarked that in principle enterprises classified under NACE Rev. 2 Section O (public administration and defence; compulsory social security) cannot be coded under private control, although there may be exceptional cases in certain countries.

### **(Variable 1.5) Collective pay agreement**

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<sup>2</sup> NUTS 2016 classification

<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32016R2066&from=EN>

This is to identify the type of pay agreement covering at least 50% of the employees in the local unit. One of the following should be chosen:

- an agreement at national level, or an interconfederal agreement, covering employees of more than one industry, and usually signed by one or more trade-union confederations and by one or more national employers' organisations,
- an industry agreement setting the terms and conditions of employment for all or most workers and employees in an individual industry or economic sector,
- an agreement for individual industries in individual regions,
- an enterprise or single-employer agreement covering only those employees with the same employer, regardless of size. The agreement may cover only certain local units or groups of employees within the enterprise,
- an agreement applying only to the employees in one local unit,
- any other type of agreement not covered above,
- no collective pay agreement exists.

Even if several categories may apply simultaneously, only one of the above categories must be chosen ('yes' answer), namely the one covering more than 50 % of the employees in the local unit.

***(Variable 1.6) Optional: Number of employees in the local unit***

This variable represents a head count of the total number of employees in the reference month (e.g. on 1 or 31 October 2018) and covers all employees, including apprentices, paid trainees and students.

***(Variable 1.7) Optional: Affiliation of the local unit to a group of enterprises***

This variable is a binary variable ('yes'/'no') and indicates whether a local unit belongs to a group of enterprises.

The group of enterprises is a statistical unit defined in Regulation (EEC) No 696/93. The group of enterprises should be considered at world level. In most cases the local unit belongs to an enterprise which is not controlled by any national or foreign group. If local units belong to an enterprise group, this is generally well known. A practical guideline that can be given to respondents is whether the accounts of the enterprise concerned are fully consolidated in the accounts of its group of enterprises.

## **2.2 Information on individual characteristics of each employee in the sample relating to the reference month**

As indicated in subsection 1.3.3, the employees to be included in the SES sample are those who actually received remuneration during the reference month. Employees who did not receive any remuneration in the reference month should be excluded. The grossing-up factors (variable 5.2) should relate to those who received remuneration in the reference month.

Annex 1 gives the codes for alphanumeric variables in this section.

### **(Variable 2.1) Sex**

The sex of the employee is to be coded here: **F** for females and **M** for males.

### **(Variable 2.2) Age**

Only the year of birth is to be given here. The age is then calculated as the difference between the reference year of the survey and the year of birth.

**Variable 2.2 should be given in four digits.**

### **(Variable 2.3) Occupation in the reference month (ISCO-08)**

The occupation is to be coded according to the International Standard Classification of Occupations, (ISCO-08) at the two-digit level and, if possible, at the three-digit level. The essential information for determining the occupation is usually the employee's job title and a description of the main tasks undertaken in the course of his/her duties.

Trainees or students with an employment contract and apprentices are classified in the occupation for which they carry out their apprenticeship or training period. Foremen are also classified in the occupation in which they supervise.

### ***(Variable 2.4) Optional: Managerial or supervisory position***

This binary variable (categories 'yes'/'no') indicates whether an employee has some form of managerial or supervisory function. The word 'managerial' is not identical to 'supervisory' because some managers do not supervise other employees. Managerial functions are related to determining, formulating, implementing, directing or advising policies and activities of enterprises or institutions. They often include supervisory responsibilities.

A person is considered to have a supervisory position when s/he supervises the work of at least one person (other than apprentices). Typically such a person might have a job title/description of 'foreman' or 'supervisor' together with the name of the occupation. A job title having included the word 'manager' (e.g. Sales manager) does not automatically mean the execution of managerial tasks.

### **(Variable 2.5) Highest successfully completed level of education and training (ISCED 2011)**

This variable concerns the level of general, professional or higher education which the employee has received according to the International Standard Classification of Education, 2011 version<sup>3</sup>. The expression ‘level successfully completed’ must be associated with obtaining a certificate or a diploma, when there is certification. In cases where there is no certification, successful completion must be associated with full attendance.

### **(Variable 2.6) Length of service in the enterprise**

The total length of service in the reference month should be based on the number of completed years of service. Any point of time during the reference month will suffice as a qualifying date (e.g. 1 or 31 October 2018). The total length of service relates to the period since the employee joined the enterprise, which may have been in another local unit. Where enterprises have been merged or there have been changes of ownership, the length of service is to be recorded as counted by the enterprise.

In the case of a total service of 5 years 10 months, represents *less than* 6 years and should be given as **5 years**.

Short periods away from work of less than 12 months (e.g. on maternity or sick leave) should be included as part of the total service (i.e. career breaks exceeding one year should be subtracted).

### **(Variable 2.7) Contractual working time (full-time or part-time)**

Full-time employees are those whose normal working hours are the same as the collectively agreed or customary hours worked in the local unit under consideration, even if their contract is for less than one year.

Part-time employees are those who work fewer hours than the normal working hours of full-time employees. Apprentices can be either Full-time or Part-time.

#### **(Variable 2.7.1) Share of a full-timer’s normal hours**

For a full-time employee, this share is always 100 %. For a part-time employee, the hours contractually worked should be expressed as a percentage of the number of normal hours worked by a full-time employee in the local unit (in a job equivalent to that of the part-time employee). In most cases, this part-time % will be less than 90%.

Please give variable 2.7.1 to two decimal places.

The percentages given for variable 2.7.1 will be used by Eurostat to gross up annual and monthly earnings (i.e., variables 4.1 and 4.2) of part-time employees to full-time basis – for comparison with corresponding earnings of FT employees.

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<sup>3</sup> <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:099:0001:0010:EN:PDF>

### **(Variable 2.8) Type of employment contract**

The following information on the type of employment contract is requested:

- Indefinite duration,
- Temporary/fixed duration  
(except apprentices, including trainees or students receiving remuneration),
- Apprentice.

### **(Variable 2.9) Optional: Citizenship and residence**

Citizenship is defined as the legal nationality of each person, and a citizen is a person who is a legal national by birth or naturalisation, whether by declaration, option, marriage or other means. Residence is defined as the country where a person has its principal dwelling.

One of the following should be selected:

- resident with national citizenship,
- resident with foreign citizenship,
- non-resident (commuter from another country) with national citizenship
- non-resident (commuter from another country) with foreign citizenship.

## **2.3 Information on working periods for each employee in the sample**

As previously indicated, the population of employees covered in the SES are those who received remuneration during the reference month. Employees without any remuneration in the reference month should be excluded. The grossing-up factors (see variable 5.2 below) should relate to the number of sampled employees who received a full month's remuneration in the reference month.

### **(Variable 3.1) Number of weeks to which the gross annual earnings relate**

Variable 3.1 refers to the employee's working time actually paid during the year and should correspond to the actual gross annual earnings (variable 4.1).

Please, give the number of weeks to 2 decimal places (e.g.  $365/7=52.14$  weeks).

Because Eurostat will use variable 3.1 to "gross up" variables 4.1 and 4.1.1, it is therefore essential to complete variable 3.1 for all employees – and to insert '52.14' when the employee's gross annual earnings relate to a full year.

PT employees should be treated like FT employees irrespective of the hours worked. If a part-timer has been paid for a full year, insert '52.14' weeks.

If another part-timer has been paid for 6 months, insert '26.07' weeks.

### **(Variable 3.2) Number of hours actually paid during the reference month**

What is required here is the number of hours actually paid during the reference month, not the number of hours in a standard working month.

Hours actually paid include all normal and overtime hours worked and remunerated by the employer during the month. Hours not worked but nevertheless paid are counted as 'paid hours' (e.g. for annual leave, public holidays, paid sick leave, paid vocational training, paid special leave etc.).

Variable 3.2 should be consistent with monthly earnings (variable 4.2). If the employee's paid hours are affected by unpaid absence, then they should be adjusted to obtain paid hours for a full month.

Where necessary, provide an approximate estimate of paid hours using:  $\text{Adjusted 3.2} = \text{Unadjusted 3.2} * (\text{Adjusted 4.2} / \text{Unadjusted 4.2})$ .

Where it is not feasible to adjust variable 4.2, then this employee should be excluded from the sample and the grossing-up factor (variable 5.2) re-calculated.

### **(Variable 3.2.1) Number of overtime hours paid in the reference month**

Overtime hours include those worked in addition to those of the normal or conventional working month. If, for example, four hours are paid at a rate of 1,5 times the normal rate, 4 hours should be recorded and not 6.

Variable 3.2.1 should be consistent with overtime earnings (variable 4.2.1). If the employee's overtime hours are affected by unpaid absence, then they should be adjusted to obtain the paid overtime hours for a full month.

Where necessary, provide a rough estimate of paid overtime hours using:  $\text{Adjusted 3.2.1} = \text{Unadjusted 3.2.1} * (\text{Adjusted 4.2.1} / \text{Unadjusted 4.2.1})$ .

Where it is not feasible to adjust variable 4.2 or 4.2.1, then this employee should be excluded from the sample and the grossing-up factor re-calculated.

### **(Variable 3.3) Annual days of holiday leave**

This refers to the total number of paid annual holidays, be they taken or not, excluding sick leave and public holidays, expressed in days. It relates to the annual total of all normal paid-leave days, including those granted to the employee on the grounds of age, performance of special duties, seniority etc. .

The following are not regarded as holidays:

- sick leave,
- training leave,
- paid special leave granted for personal reasons,
- additional time off granted under working-time reduction agreements.



### ***(Variable 3.4) Optional: Other annual days of paid absence***

This variable is again expressed in days and it includes, for example:

- the total number of paid sick leave days actually taken during the year,
- paid special leave granted for personal reasons,
- public holidays.

It excludes paid days, which are treated as being equivalent to days actually worked, such as paid annual days spent by the employee on vocational training.

## **2.4 Information on earnings for each employee in the sample**

### **(Variable 4.1) Gross annual earnings in the reference year**

The actual gross earnings for the calendar year should be supplied, not the gross annual salary featured in the employee's contract.

Data for variable 4.1 should be provided for all employees for which gross monthly earnings (variable 4.2) has been supplied. Variable 4.1 should not be supplied if variable 4.2 is not completed. This is because the reference population and grossing-up factor (variable 5.2) both relate to employees that have actually received remuneration in the reference month.

It does not matter if the employee's earnings do not always relate to a full year. Some employees will have periods of unpaid absence, or will have joined or left the enterprise during the year. Give the actual gross earnings in the year 2018.

Do not adjust the actual gross annual earnings. When variable 3.1 (number of weeks to which the annual earnings relate) is less than 52.14 weeks, Eurostat will use variable 3.1 to "gross up" variable 4.1 (and variable 4.1.1), providing 3.1 is 30 or more weeks (as was done in previous SES 2002/2006/2010/2014).

### **(Variable 4.1.1) Annual bonuses and allowances not paid at each pay period**

The word "bonuses" is a bit too narrow. Variable 4.1.1 includes any periodic, irregular, ad-hoc and exceptional bonuses and other payments that do not feature every pay period. Typical examples are Christmas and holiday bonuses, 13th or 14th month payments, allowances for leave not taken, occasional commissions, productivity bonuses and profit-sharing premiums.

The main difference between annual earnings and monthly earnings is the inclusion of payments that do not regularly occur in each (monthly) pay period. Although variable 4.1.1 is already subsumed within annual gross earnings, Eurostat asks for "annual bonuses" to be separately distinguished because they account for a significant proportion of annual earnings in a number of countries.

***(Variable 4.1.2) Optional: Annual payments in kind***

This variable refers to an estimate of the value of all goods and services made available to employees through the enterprise or local unit during the reference year. Included are company products, staff housing, company cars, stock options and share purchase schemes. If information is available from personal income taxation on wages and salaries in kind, this may be used as a proxy.

When variable 3.1 is less than 52.14 weeks, do not adjust variable 4.1.2.

**(Variable 4.2) Gross earnings for the reference month**

This variable covers remuneration in cash paid during the reference month before any tax deductions and social security contributions payable by wage earners and retained by the employer. Variable 4.2 should be consistent with the number of hours paid during the reference month (variable 3.2).

Where the employee's gross monthly earnings are affected by unpaid absence (due to sickness, maternity or study leave etc. or simply because the employee joined or left the enterprise during the reference month), then the earnings should be suitably adjusted in order to provide an estimate of the employee's earnings for a full month. Where it is not feasible to adjust the employee's monthly earnings so that the estimated figure corresponds to a full month's earnings, then the employee should be excluded from the sample. Where necessary, the grossing-up factors (variable 5.2) should be re-calculated so that it reflects the exclusion of such employees from the sample.

**(Variable 4.2.1) Earnings related to overtime**

The amount of overtime earnings paid for overtime hours is required. The full overtime rates should be taken into account and not just the premium element added to the basic/normal hourly rate.

If the employee's earnings are affected by unpaid absence, then the overtime earnings should be adjusted to obtain overtime earnings for a full month.

Where necessary, provide a rough estimate of overtime earnings using:  $\text{Adjusted 4.2.1} = \text{Unadjusted 4.2.1} * (\text{Adjusted 4.2} / \text{Unadjusted 4.2})$ . Where it is not feasible to adjust variable 4.2, then such employees should be excluded from the sample and the grossing-up factor (variable 5.2) re-calculated.

Variable 4.2.1 should be consistent with variable 3.2.1 (the number of overtime hours paid during the reference month).

**(Variable 4.2.2) Special payments for shift work**

These are premium payments during the reference month for shift work, night work or weekend work where these are not treated as overtime. The amount to include is the premium element or supplementary payment, not the total payment for such shift work.

Where these special payments are affected by unpaid absence, they should be adjusted to provide an estimate of the shift payments for a full month.

Where necessary, provide a rough estimate of payments for shift work using:  $\text{Adjusted 4.2.2} = \text{Unadjusted 4.2.2} * (\text{Adjusted 4.2}/ \text{Unadjusted 4.2})$ . Where it is not feasible to adjust variable 4.2, then, as indicated above, this employee should be excluded from the sample and the grossing-up factor (variable 5.2) re-calculated.

***(Variable 4.2.3) Optional: Compulsory social contributions and taxes paid by the employer on behalf of the employee***

This variable refers to the total amount of compulsory social contributions and taxes paid by the employer on behalf of the employee to government authorities during the reference month. This information is requested in order to obtain net monthly earnings for each employee.

If the employee's earnings are affected by unpaid absence, then variable 4.2.3. should be adjusted to obtain the social security contributions for a full month.

Where necessary, provide an approximate estimate of variable 4.2.3, using:  $\text{Adjusted 4.2.3} = \text{Unadjusted 4.2.3} * (\text{Adjusted 4.2}/ \text{Unadjusted 4.2})$ . Where it is not feasible to adjust variable 4.2, then this employee should be excluded from the sample and the grossing-up factor (variable 5.2) re-calculated.

***(Variable 4.2.3.1) Optional: Compulsory social-security contributions***

The amount relates to the compulsory employee's social security contributions for the reference month.

If the employee's earnings are affected by unpaid absence, then variable 4.2.3.1 should be adjusted to obtain the compulsory social security contributions for a full month.

Where necessary, provide an approximate estimate of variable 4.2.3.1 using:  $\text{Adjusted 4.2.3.1} = \text{Unadjusted 4.2.3.1} * (\text{Adjusted 4.2}/ \text{Unadjusted 4.2})$ . Where it is not feasible to adjust variable 4.2, then this employee should be excluded from the sample and the grossing-up factor (variable 5.2) re-calculated.

***(Variable 4.2.3.2) Optional: Taxes***

This relates to the amount of all taxes on the employee's earnings withheld by the employer for the reference month paid by the employer on behalf of the employee to the government authorities.

If the employee's earnings are affected by unpaid absence, then variable 4.2.3.2 should be adjusted to obtain the taxes for a full month.

Where necessary, provide an approximate estimate of variable 4.2.3.2 using:  $\text{Adjusted 4.2.3.2} = \text{Unadjusted 4.2.3.2} * (\text{Adjusted 4.2}/ \text{Unadjusted 4.2})$ . Where it is not feasible to adjust variable 4.2, then this employee should be excluded from the sample and the grossing-up factor (variable 5.2) re-calculated.

### **(Variable 4.3) Average gross hourly earnings in the reference month**

The figure required is the average gross earnings per hour paid to the employee in the reference month. This figure should be consistent with the average gross hourly earnings derived from gross earnings for the reference month (variable 4.2) divided by the number of hours paid during the same period (variable 3.2).

**For accuracy, please give variable 4.3 to two decimal points.**

## **2.5 Grossing-up factors**

### **(Variable 5.1) Grossing-up factor for the local unit**

Within each sampling stratum, the grossing-up factor for each local unit is calculated as follows:

*(Variable 5.1) = (Number of local units in the population) / (Number of local units in the sample)*

**For accuracy, please give variable 5.1 to two decimal places.**

### **(Variable 5.2) Grossing-up factor for the employees**

The grossing-up factor for employees is calculated as follows:

*(Number of employees in the population) / (Number of employees in the sample)*

For each local unit, the grossing-up factor for employees is based on:

*(Variable 5.2) = (Variable 5.1) \* (Number of employees in the local unit / Number of employees in the sample)*

**For accuracy, please give variable 5.2 to two decimal places.**

As previously indicated, it is essential that the denominator (“*Number of employees in the sample*”) corresponds to those employees that have received a full month’s remuneration in the reference month.

Where it is necessary to exclude some of the sampled employees that have periods of unpaid absence(s) in the reference month, then the grossing-up factor supplied should be re-calculated to take account of the employees that have been excluded.

**In general, whenever the microdata for an individual business or individual employee should be withdrawn (for whatever the reason), then the grossing-up factor should be re-calculated by the country concerned.**

Mandatory variables

Complete information must be supplied for all mandatory variables on all microdata records. Otherwise, the grossing-up factor supplied will not be suitable for all variables.

#### Optional variables

For those optional variables that a country chooses to supply, data should be provided (as for mandatory variables) for all observation units and employees.

## **3 Processing of microdata**

### **3.1 Technical format and transmission of the SES microdata**

This section presents the technical format to be used for the transmission of the 2018 SES microdata.

The **codes** to be used for alphanumeric variables are given in **Annex 1**.

#### **3.1.1 Requirements**

The individual data concerning each local unit and each employee should be provided in the form of two types of microdata record:

***Table A: records for the local unit,***

***Table B: records for the employee.***

The first record of the file with local units has to contain the column names as in subsection 3.1.4 (local unit table). The one of the file with employees has to contain the column names as in subsection 3.1.5 (employee table).

For easy identification of an employee, a key for each employee should be provided which does not disclose the identity of the person (KEY\_E).

The employee records have to be linked to the local unit records by a key (KEY\_L). You are free to use this field as you like, providing, of course, that the key itself does not disclose the identity of the business. This could be an artificial number, or an existing key, as long as the same key is used in both the local unit and the employee records.

In addition to the Regulation 1738/2005, Eurostat would also like to collect an enterprise key (KEY\_B). This key enables to identify local units which belong to the same enterprise. All the technical characteristics are the same than requested for the local unit and the employee key. The enterprise key will be used while creating the anonymised data sets to ensure the anonymity of the data set at the enterprise level. This key shall be provided only in the local unit table, record A. The enterprise key (KEY\_B) is optional. When available it may be transmitted on a voluntary basis.

Each key (e.g. a sequence number) should uniquely identify an employee, a local unit or an enterprise. Therefore, these identifiers should be artificial and not real.

### 3.1.2 Contents of tables A and B

The content and sequence of the SES variables in tables A and B are given in subsections 3.1.4 and 3.1.5 below.

The records should contain a field per variable. All records should be saved in **CSV file** format and variables should strictly follow the order of the tables in subsections 3.1.4 and 3.1.5.

**To separate the variables, semi-colon ';' should be used.**

“Alphanumeric” variables include:

- (i) variables which are coded only with letters (e.g. M, F, FT, PT, etc.) and
- (ii) variables where the codes contain a combination of letters and numbers (e.g. BE1, E10\_49, X12).

### 3.1.3 Variables

All items for records in tables A and B should be completed in full. There should be entries for all individual items, including optional variables (see below).

#### **Mandatory variables**

Data should be provided for all mandatory variables in Regulation 1738/2005. Please ensure that there are no missing values.

#### **Optional variables**

These should be coded **strictly** according to the following rules:

- When information **is available** for an optional variable, the data should be provided (as for other variables) for all observation units or employees.
- When information for an optional variable is **not available, please insert ‘OPT’ for every observation unit or employee** for alphanumeric variables and **‘99999999’** for numeric variables, the number of "nines" corresponding to the length of the field.

#### **Zero values**

**‘0’** shall **only** be used for those variables with a **real zero value** may sometimes genuinely occur (e.g. when an employee has no overtime or shift premium payments in the reference month).

#### **Units to be used for alphanumeric and numeric variables**

The contents of records A and B are given in subsections 3.1.4 and 3.1.5, respectively. An ‘A’ identifies all alphanumeric variables and an ‘N’ identifies all numeric variables.

‘N’ (numeric) variables *should be expressed in absolute terms namely by giving the numbers in full* (and not in decimals, or in tens, hundreds, thousands,

millions, etc.). *However, because of the need for precision, the values for variables 3.1, 4.3, 5.1 and 5.2 should be given to two decimal points.*

There is one numeric variable that is different. This is the “**share of a full-timer’s normal hours**” (variable 2.7.1) which *should be expressed as a percentage, and also be given to two decimal places, e.g. 50.00 for a part-timer working half the time of a full-timer’s normal hours.*

The decimal separator is a point '.' and thousand separators shall not be provided.

Where ‘N’ variables relate to **money values** (e.g. hourly, monthly, annual earnings, bonuses, taxes, social security contributions, payments in kind) these **shall be expressed in units of the national currency** of the country concerned.

### 3.1.4 Contents of TABLE A: Information about the local unit

#### (EDAMIS KEY: EARNINGS\_SESA\_A4)

| Regulation<br>(1738/2005)<br>(SES 2018) | Column Name | Data type | Data length | Data Label   | Mandatory (M) or Optional (O) variable |
|---|-------------|-----------|-------------|--|--|
|   | TABLE       | A         | 1           | Table identification (A)   | M                                      |
|   | YEAR        | N         | 8           | Identification of the reference period (e.g.2018)                  | M                                      |
| 1.1                                     | A11         | A         | 3           | Geographical location of the statistical unit, local unit (NUTS-1) | M                                      |
| 1.2                                     | A12         | A         | 8           | Size of the enterprise to which the local unit belongs             | M                                      |
| 1.3                                     | A13         | A         | 3           | Principal economic activity of the local unit (NACE Rev. 2)        | M                                      |
| 1.4                                     | A14         | A         | 1           | Form of economic and financial control                             | M                                      |
| 1.5                                     | A15         | A         | 1           | Collective pay agreement   | M                                      |
| 1.6                                     | A16         | N         | 8           | Total number of employees in the local unit in the reference month | O                                      |
| 1.7                                     | A17         | A         | 3           | Affiliation of the local unit to a group of enterprises            | O                                      |
| 5.1                                     | A51         | N         | 8.2         | Grossing-up factor for local units (to 2 decimal places)           | M                                      |
|   | KEY_B       | A         | 6           | Key identifying the enterprise                                     | O                                      |
|   | KEY_L       | A         | 6           | Key identifying the local unit                                     | M                                      |

### 3.1.5 Content of TABLE B: Information on individual characteristics of each employee in the sample relating to the reference year

(EDAMIS KEY: EARNINGS\_SESB\_A4)

| Regulation<br>(1738/2005)<br>(SES 2018) | Column Name | Data type | Data length | Data Label   | Mandatory (M) or Optional (O) variable |
|---|-------------|-----------|-------------|--|--|
|   | TABLE       | A         | 1           | Table identification (B)   | M                                      |
|   | YEAR        | N         | 8           | Reference period (e.g. 2018)   | M                                      |
|   | KEY_E       | A         | 6           | Key identifying the employee   | M                                      |
| 2.1                                     | B21         | A         | 1           | Sex  | M                                      |
| 2.2                                     | B22         | N         | 8           | Age ( <i>Year of Birth</i> )   | M                                      |
| 2.3                                     | B23         | A         | 3           | Occupation in the reference month (ISCO-08)  | M                                      |
| 2.4                                     | B24         | A         | 3           | Management position / supervisory position   | O                                      |
| 2.5                                     | B25         | A         | 2           | Highest successfully completed level of education (ISCED-2011)                         | M                                      |
| 2.6                                     | B26         | N         | 8           | Length of service in enterprise (in years)   | M                                      |
| 2.7                                     | B27         | A         | 2           | Full-time or part-time employee  | M                                      |
| 2.7.1                                   | B271        | N         | 8.2         | % share of a full-timer's normal hours (to 2 decimal places)                           | M                                      |
| 2.8                                     | B28         | A         | 1           | Type of employment contract  | M                                      |
| 2.9                                     | B29         | A         | 3           | Citizenship and residence  | O                                      |
| 3.1                                     | B31         | N         | 8.2         | Number of <u>weeks</u> to which the gross annual earnings relate (to 2 decimal places) | M                                      |
| 3.2                                     | B32         | N         | 8           | Number of hours paid during the reference month  | M                                      |
| 3.2.1                                   | B321        | N         | 8           | Number of overtime hours paid in the reference month                                   | M                                      |
| 3.3                                     | B33         | N         | 8           | Annual days of holiday leave (in full days)  | M                                      |
| 3.4                                     | B34         | N         | 8           | Other annual days of paid absence  | O                                      |
| 4.1                                     | B41         | N         | 16          | Gross annual earnings in the reference year  | M                                      |
| 4.1.1                                   | B411        | N         | 16          | Annual Bonuses and allowances not paid at each pay period                              | M                                      |
| 4.1.2                                   | B412        | N         | 8           | Annual payments in kind  | O                                      |



| Regulation<br>(1738/2005)<br>(SES 2018) | Column Name | Data type | Data length | Data Label   | Mandatory (M) or Optional (O) variable |
|---|-------------|-----------|-------------|--|--|
| 4.2                                     | B42         | N         | 8           | Gross earnings in reference month  | M                                      |
| 4.2.1                                   | B421        | N         | 8           | Earnings related to overtime   | M                                      |
| 4.2.2                                   | B422        | N         | 8           | Special payments for shift work  | M                                      |
| 4.2.3                                   | B423        | N         | 8           | Compulsory social contributions and taxes paid by the employer on behalf of the employee | O                                      |
| 4.2.3.1                                 | B4231       | N         | 8           | Compulsory social security contributions   | O                                      |
| 4.2.3.2                                 | B4232       | N         | 8           | Taxes  | O                                      |
| 4.3                                     | B43         | N         | 8.2         | Average gross hourly earnings in the reference month (to 2 decimal places)               | M                                      |
| 5.2                                     | B52         | N         | 8.2         | Grossing-up factor for employees (to 2 decimal places)                                   | M                                      |
|   | KEY_L       | A         | 6           | Identification key of the local unit the employee belongs to                             | M                                      |

### 3.1.6 Data transmission to Eurostat

The two data files with microdata records for Tables A and B will be transmitted for validation using standard Eurostat transmission tools and services.

**Table A** shall be supplied under EDAMIS data-set id: **EARNINGS\_SESA\_A4**

**Table B** shall be supplied under EDAMIS data-set id: **EARNINGS\_SESB\_A4**.

## 3.2 Data Validation and Eurostat Calculations

### 3.2.1 Introduction

The following section deals with the following issues:

- The **data validation** that will be undertaken by Eurostat on receipt of the 2018 SES microdata from each country.
- The **adjustments, grossing-up and other calculations** that Eurostat will undertake on the SES microdata.

#### Data validation

This consists of *Global checks* and *Plausibility checks*.

'*Global checks*' are necessary to ensure that complete data is received on microdata records from each country. Missing entries/values for individual variables cannot be accepted because this affects the grossing up factors and the population estimates. The global checks are presented in subsection 3.2.2. .

'*Plausibility checks*' on each variable are needed to ensure that the data are reasonable and consistent with other 2018 SES variables (see subsection 3.2.3).

These global and plausibility checks by Eurostat will automatically generate an **output report** on the microdata received from each country. This output report will be transmitted to the country, indicating where there is a data problem and the action required by the country if necessary.

Before transmitting the microdata to Eurostat, each country should carry out the same global and plausibility checks as listed below. This is essential in order to avoid returning the microdata to a country for correction and revisions to the grossing-up factors (variables 5.1 and 5.2). These checks will also help to ensure that the treatment and quality of the data is harmonised across the countries.

In addition to this data validation, Eurostat may run additional statistical checks to detect outliers such as hourly earnings below 1/50<sup>th</sup> of the median earnings or more than 50 times higher, for the country concerned.

#### Data adjustments, grossing-up and other calculations

This relates to calculations that Eurostat will undertake, for example, to convert data for part-time employees to full-time units, or to convert data for the reference year on to an annual basis in those cases where the employee has worked for less than 52.14 weeks. These calculations are specified in subsection 3.2.4.

### 3.2.2 Global checks

It is necessary to distinguish between mandatory and optional variables:

#### Completeness of information for each mandatory variable:

For each country, all microdata records should contain data for mandatory variables. Missing data or codes will not be accepted. The mandatory variables are: 1.1, 1.2, 1.3, 1.4, 1.5, 2.1, 2.2, 2.3, 2.5, 2.6, 2.7, 2.7.1, 2.8, 3.1, 3.2, 3.2.1, 3.3, 4.1, 4.1.1, 4.2, 4.2.1, 4.2.2, 4.3, 5.1 and 5.2. .

#### Completeness of information for each optional variable:

Each country will decide which optional variables it is able to supply. Eurostat will make use of the data supplied, though it is preferable that all microdata records should contain data for that optional variable. The optional variables are: 1.6, 1.7, 2.4, 2.9, 3.4, 4.1.2, 4.2.3, 4.2.3.1, and 4.2.3.2. .

### 3.2.3 Plausibility checks

Apart from checking that the correct codes have been used for the variables, the following plausibility checks are planned for the variables listed below. Each country will undoubtedly have many more checks and more demanding checks than listed below. Therefore, each country is encouraged to use its own checks, providing that the resulting SES microdata satisfy the checks below.

#### **(Variable 1.4): Form of economic and financial control**

|                                   |
|-----------------------------------|
| if var 1.3 = X84 then var 1.4 = A |
|-----------------------------------|

#### **(Variable 1.6) Optional: Number of employees in the local unit**

- If data is available, the following plausibility checks will be carried out:

|  |
|--|
| var.1.6 $\geq$ 1<br>If var.1.2 = E1_9, then var.1.6 $\leq$ 9<br>else if var.1.2 = E10_49, then var.1.6 $\leq$ 49<br>else if var.1.2 = E50_249, then var.1.6 $\leq$ 249<br>else if var.1.2 = E250_499, then var.1.6 $\leq$ 499<br>else if var.1.2 = E500_999, then var.1.6 $\leq$ 999 |
|--|

#### **(Variable 2.2) Age**

|  |
|--|
| 14 years $\leq$ (2018 - var.2.2) $\leq$ 80 years |
|--|

#### **(Variable 2.6) Length of service in the enterprise**

|  |
|--|
| 0 years $\leq$ var.2.6 $\leq$ 60 years     |
| 14 years $\leq$ (2018 - var.2.2) - var.2.6 |

**(Variable 2.7.1) Share of a full-timer's normal hours (in %)**

if var 2.7 = FT then var 2.7.1 = 100  
if var 2.7 = PT then var 2.7.1 < 100

**(Variable 2.8) Type of employment contract**

if var.2.8 =code C (employee is an apprentice),  
then 14 years ≤ (2018 - var.2.2) ≤ 60 years

**(Variable 3.1) Number of weeks to which the gross annual earnings relate**

0.1 < var.3.1 < 53

**(Variable 3.2) Number of hours actually paid during the reference month**

var.3.2 > 0  
0.90 \* var.4.2/ var.4.3 ≤ var.3.2 ≤ 1.10 \* var.4.2/ var.4.3  
If var.2.7 = FT, then 130 hours < (var.3.2 - var.3.2.1) < 215 hours  
If var.2.7 = PT, then 130 \* (var.2.7.1/100) < (var.3.2 - var.3.2.1) < 215 \* (var.2.7.1/100)

**(Variable 3.2.1) Number of overtime hours paid in the reference month**

In general: var.3.2.1 < var.3.2.  
If var.4.2.1 > 0 then var.3.2.1 > 0  
var.3.2.1 < 0.65 \* (var.3.2 - var.3.2.1)  
[This last check recognises that in some countries the number of overtime hours represents a very high proportion of the total number of hours paid during the reference month (var.3.2)].

**(Variable 3.3) Annual days of holiday leave (in full days)**

If var.2.7 = FT, then var.3.3 < 80 days for NACE sections B-N, O, Q, R and S.  
If var.2.7 = PT, then var.3.3 < 80 days \* (var.2.7.1/100) for sections B-N, O, Q, R and S.  
var.3.3 < 120 days for NACE section P.

**(Variable 3.4) Optional: Other annual days of paid absence**

- If data is available, the following plausibility check will be carried out:

var.3.4 < 100 days.

**(Variable 4.1) Gross annual earnings in the reference year**

var.4.1 > 0  
var.4.1 > var.4.1.2  
var.4.1 > (var.4.2 – var.4.2.1) \* 0.70 \* var.3.1 / (4.345238)  
[This last check is to ensure that annual earnings are at least ‘z’ times the value of monthly earnings, where the term “var.3.1 / (4.345238)” represents the number of months z, that the employee worked in 2018].

**(Variable 4.1.1) Annual bonuses and allowances not paid at each pay period**

var.4.1.1 < var.4.1

**(Variable 4.1.2) Optional: Annual payments in kind**

- If data is available, the following plausibility check will be carried out:

var.4.1.2 < 0.20 \* var.4.1

**(Variable 4.2) Gross earnings in the reference month**

var.4.2 > 0  
var.4.2 > var.4.2.1 + var.4.2.2  
var.4.2 > var.4.2.3  
If var.4.3 > 0 then (0.90 \* var.4.3 \* var.3.2) ≤ var.4.2 ≤ (1.10 \* var.4.3 \* var.3.2)

**(Variable 4.2.1) Earnings related to overtime**

var.4.2.1 ≥ 0  
var.4.2.1 < var.4.2  
If (var.3.2.1 > 0 and var.4.2.1 > 0), then (var.4.2.1 / var.3.2.1) ≥  
(var.4.2 – var.4.2.1) / (var.3.2 – var.3.2.1) \* 0.60  
[Workers can receive a lower hourly rate for overtime than for normal hours].

**(Variable 4.2.2) Special payments for shift work**

var.4.2.2 ≥ 0  
var.4.2.2 < var.4.2

***(Variable 4.2.3) Optional: Compulsory social contributions and taxes paid by the employer on behalf of the employee***

- If data for variable 4.2.3 is available, the following plausibility checks will be carried out:

|   |
|---|
| If var.4.2.3.1 and var.4.2.3.2 are both available, $\text{var.4.2.3} = \text{var.4.2.3.1} + \text{var.4.2.3.2}$ ;<br>If only var.4.2.3 is available, $\text{var.4.2.3} \geq 0$ .<br>$\text{var.4.2.3} < \text{var.4.2}$ |
|---|

***(Variable 4.2.3.1) Optional: Compulsory social-security contributions***

- If data is available, the following plausibility check will be carried out:

|   |
|---|
| $\text{var.4.2.3.1} < \text{var.4.2} - (\text{var.4.2.1} + \text{var.4.2.2})$ |
|---|

***(Variable 4.2.3.2) Optional: Taxes***

- If data is available, the following plausibility check will be carried out:

|   |
|---|
| $\text{var.4.2.3.2} < \text{var.4.2} - (\text{var.4.2.1} + \text{var.4.2.2})$ |
|---|

**(Variable 4.3) Average gross hourly earnings in the reference month**

|  |
|--|
| $\text{var.4.3} \geq 0$<br>If $\text{var.4.3} > 0$ , then $0.90 * (\text{var.4.2} / \text{var.3.2}) \leq \text{var.4.3} \leq 1.10 * (\text{var.4.2} / \text{var.3.2})$ |
|--|

**(Variable 5.1) Grossing-up factor for the local unit**

|                         |
|-------------------------|
| $\text{var.5.1} \geq 1$ |
|-------------------------|

**(Variable 5.2) Grossing-up factor for the employees**

|                         |
|-------------------------|
| $\text{var.5.2} \geq 1$ |
|-------------------------|

### 3.2.4 Calculations that Eurostat will undertake

This subsection deals with the adjustments, grossing-up and other computations that Eurostat will undertake on the 2018 SES microdata. These relate to calculations, for example, to convert data for part-time employees into full-time units, or to adjust data for the reference year on to an annual basis in those cases where the employee has worked for less than 52.14 weeks.

#### **PT employees: conversion to full-time units.**

Variable 2.7 provides a simple head count of PT employees.

Variable 2.7.1 will be used to convert PT employees into full-time units (FTUs).

#### **PT employees: adjusting gross monthly and annual earnings (variables 4.2 and 4.1) on to a full-time basis.**

The actual monthly and annual earnings of PT employees provided by the countries are of interest and will be disseminated. Additionally, because the actual earnings take no account of the hours worked by part-timers, Eurostat will use the percentages for part-timers (given by variable 2.7.1) to gross up the gross monthly earnings (variable 4.2) and gross annual earnings (variable 4.1) of PT employees on to a full-time basis. This will allow an approximate comparison with corresponding earnings of FT employees. This grossing up procedure for PT employees will not be undertaken for other monthly or annual variables.

#### **Gross annual earnings and bonuses (variables 4.1 and 4.1.1): adjustments of these variables on to an annual basis where the FT employee has worked for less than 52 weeks.**

- Variables 4.1 and 4.1.1 will not be used if variable 3.1 < **30** weeks.
- If **30** ≤ var.3.1 < 53 weeks, then the above variables will be adjusted on to an annual basis. For example, for variable 4.1:

$$\text{Adjusted var.4.1} = \text{unadjusted var.4.1} * (52.143 / \text{var.3.1})$$

Likewise, for **variables 4.1.1**.

***(Variable 4.1.2) Optional: Annual payments in kind***

- Variable 4.1.2, when available, will be used without adjusting on to an annual basis when  $52 \leq \text{var.3.1} < 53$  weeks.
- When  $30 \leq \text{var.3.1} < 53$  weeks, variable 4.1.2 will also be used (after being adjusted on to annual basis).

**(Variable 5.1) Use of the grossing-up factor for the local unit**

The grossing-up factors (variable 5.1) will be applied by Eurostat to the variables on each microdata record for the local units to obtain population estimates of the total number of local units, including breakdowns by region, NACE activity, etc..

**(Variable 5.2) Use of the grossing-up factor for the employees**

Eurostat will apply variable 5.2 to the variables on microdata records for the employees to obtain population estimates of the total number of employees and their aggregate earnings (broken down by sex, age, FT/PT, etc). The grossed up number of employees will be used for weighting purposes, including the calculation of European averages. Likewise, the grossed up number of employees will be used as the denominator for the calculation of employees' average earnings (hourly, monthly and annual), average paid hours, holidays, etc. .



### 3.3 Treatment of confidentiality

This section summarizes the procedures that Eurostat will follow to ensure that the 2018 SES microdata is protected and that the disseminated data is safe.

All Member States will send SES microdata to Eurostat. Eurostat has adopted the following rules to protect the confidentiality of these data.

*First*, the raw SES microdata that each country transmits (via EDAMIS) to Eurostat should not contain any personal identifiers. The microdata will then remain in a secure Eurostat database. This non-anonymised microdata will never leave Eurostat.

*Secondly*, Eurostat will only disseminate tabular SES data via Eurostat's online database or Eurostat publications. There will be no risk at all to the countries because the tabular data on Eurostat's online database or in Eurostat publications will be too aggregated to permit any disclosure. However, to ensure all such tabular information is safe, appropriate data processing rules will be applied and action taken to remove any residual risks to individual businesses or individual employees. The rules applied are described in the following taking into consideration countries' specificities. The tabular information to be disseminated by Eurostat (via Eurostat's online database) will be very similar to the one available online for previous SES vintages.

*Thirdly*, Eurostat may grant access to researcher microdata of the SES 2018 (including previous vintages) in the SAFE Centre at Eurostat and through anonymised microdata via a CD-ROM according to the rules laid down in the relevant Regulations<sup>4</sup> in agreement with the countries. In this context also no information which may permit the identification of individual records of the data is allowed to be disclosed. The non-identification covers both primary and secondary confidentiality.

Primary confidentiality: it concerns tabular cell data, whose dissemination would permit attribute disclosure. The two main reasons for declaring data to be primary confidential are:

- Too few units in a cell
- Dominance of one or two units in a cell.

Secondary confidentiality: it concerns data which is not primary disclosive, but whose dissemination, when combined with other data permits the identification of a microdata unit or the disclosure of a unit's attribute. Prospective results to be published or otherwise released shall be checked by Eurostat in order to avoid any disclosure of confidential data.

Further to the above, no statistics (tables, graphs, textual references) shall be published on any kind of sub-population (cell),

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<sup>4</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32013R0557&from=EN> <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32002R0831&from=EN> <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32001R0045&from=EN>

1. which consist of less than 10 units (enterprises, local units or employees). This rule can be moderated only in particular situations with Eurostat's explicit prior written consent without going, however, in any circumstances below 4 units.

2. where one enterprise / local unit represents more than 70% of the total subpopulation employment or total earnings (measured by the number of employees and the total gross earnings in the reference month).

3. where two enterprises / local units represent more than 85% of the total subpopulation employment or total earnings (measured by the number of employees and the total gross earnings in reference month).

In addition, where there are primary confidential cells, the secondary confidentiality treatment is compulsory to make sure these primary confidentiality cells cannot be estimated with the help of the other cells.

Even if the confidentiality has been defined to be in the researcher's (or researcher's background institution's) responsibility, Eurostat validates all output the researcher wishes to export from the SAFE Centre. Data which has been validated is safe to be used further outside the SAFE Centre or to be published as such.

Notice that the examples and remarks below are given only as an indication and guideline for the researcher. They do not cover all the possible situations and possibilities. The above- mentioned general non-disclosure principle and the specific rules must be respected in all circumstances.

#### *Cell rule - Primary confidentiality*

Primary confidentiality means that any cell of the output to be exported from the SAFE Centre needs to fulfil directly the conditions above (1 to 3).

Illustration (i):

| <b>Region</b>    | <b>Economic activity</b> | <b>Occupation</b> | <b>Median earnings</b> | Number of local units | Number of employees |
|------------------|--------------------------|-------------------|------------------------|-----------------------|---------------------|
| <b>AA1</b>       | <b>61</b>                | <b>21</b>         | <b>25.2</b>            | 20                    | 120                 |
| <b>AA1</b>       | <b>61</b>                | <b>22</b>         | <b>30.5</b>            | 4                     | 25                  |
| <b>AA1</b>       | <b>61</b>                | <b>23</b>         | <b>22.2</b>            | 18                    | 55                  |
| <b>AA1</b>       | <b>61</b>                | <b>24</b>         | <b>24.4</b>            | 16                    | 210                 |
| <b>AA1</b>       | <b>61</b>                | <b>25</b>         | <b>19.1</b>            | 31                    | 482                 |
| <b>Total AA1</b> | <b>61</b>                | <b>21-26</b>      | <b>23.1</b>            | 89                    | 892                 |

In the Illustration (i), the occupation 22 does not fulfil the condition that the published cell shall have 10 or more units in it. This output proposal would be rejected as the number of local units in occupation 22 is only 4.

*Cell rule - Secondary confidentiality*

Hiding the occupation 22 in the Illustration (i) would create a problem of secondary confidentiality: a reader would be able to calculate the number of the local units in the hidden cell using the total AA1 and non-hidden information.

Also the hidden sensitive information, median earnings, could become easily estimated for the occupation 22, at least its range. This output proposal would be rejected even with hiding the information in the line of the occupation 22.

Illustration (i) is just one relatively simple example of the secondary confidentiality. While protecting and validating the secondary confidentiality, the data in different independent tables and different forms of presentations (graphs) and classification levels and systems shall be taken into account (some aspects to mention).

*Dominance rule*

Alike with the rule of having at least 10 units in the published cell, the output must fulfil the dominance rules 2 and 3.

As the SES data set does not have amongst mandatory variables any precise measure on the size of the enterprise or the local unit, dominance rules are linked to the number of employees in each unit and the gross earnings they represent.

Illustration (ii):

| Local unit/<br>Enterprise | Average<br>gross<br>earnings in € | Number of<br>employees | Total gross<br>earnings in € |
|---------------------------|-----------------------------------|------------------------|------------------------------|
| 1                         | 2 333                             | 5                      | 11 665                       |
| 2                         | 3 535                             | 603                    | 2 131 605                    |
| 3                         | 2 802                             | 10                     | 28 020                       |
| 4                         | 2 956                             | 12                     | 35 472                       |
| 5                         | 1 999                             | 6                      | 11 994                       |
| 6                         | 2 716                             | 10                     | 27 160                       |
| 7                         | 2 350                             | 9                      | 21 150                       |
| 8                         | 2 752                             | 20                     | 55 040                       |
| 9                         | 2 232                             | 6                      | 13 392                       |
| 10                        | 1 998                             | 10                     | 19 980                       |
| <b>Total 1-10</b>         | <b>3 409</b>                      | <b>691</b>             | <b>2 355 478</b>             |

The whole table in the Illustration (ii) represents one cell. There, only the total average gross earnings € 3 409 was aimed to be published. However as the second local unit / enterprise represents 87% of the employees and 90% of the gross earnings, the total average gross earnings € 3 409 of this cell cannot be published.

The dominance rule with two largest units of the cell works similarly. Further, the secondary confidentiality needs to be respected also in the dominance rule context.

*Regressions and other forms of output*

Because of the secondary confidentiality the tabular data output may become very complicated to validate. This may also be the situation when moving further from the standard tables. Linear and non-linear estimation, simulation, modelling, different types of developed analysis, particular indices and all (other) kind of econometric methods and their output may require a lot of specific knowledge to be able to validate the disclosiveness of the output.

Researchers shall be able to explain the processes and show that the output is non-disclosive. In general, regression results are non-disclosive at an exact level (some inferences may be drawn within a margin of error in particular cases). Moreover, this small risk can be reduced further in ways which do not significantly reduce the usefulness of the results. The simplest way is non-reporting of incidental parameters, such estimated constants or the coefficients on irrelevant dummy variables.

In general a regression with  $(N-K) \rightarrow \infty$  - with N: number of observations and K: number of parameters - which do not report all significant parameters is non-disclosive for all practical purposes.

For other analytical results, the disclosive nature depends on the manipulations carried out. Note that the assumption is that results are disclosive unless proved otherwise, and therefore it is in researcher's interests to show that the results are (in practice) non-disclosive.

Graphs are also treated as tables which just present the information in a different form. Quantiles, maximum or minimum values are also considered as tables (with potentially only one unit in a cell). Detecting and protecting secondary confidentiality for the other than tabular forms of output shall be ensured.

#### *Rejection of the output*

The proposed output will be automatically rejected if the rules 1-3 are not respected. Linked to that, the output may be rejected also if the output is not fully understood or the output is very long. In these cases Eurostat cannot be sure whether the confidentiality rules are fully respected and cannot therefore validate the data for certainty. Additionally, undocumented output (tables or other results alone) will not be approved.

Eurostat does not make proposals how to modify the output to get it accepted but just indicates the reason why the output has been rejected.

### 3.4 Dissemination Tables

The 2018 SES results will be disseminated in the following ways:

- **Eurostat's database:** Detailed results will be available via the Eurostat online database in the form of multidimensional tables. Information should also be available in the new merged datasets containing SES 2002, 2006, 2010, 2014 and 2018 data.

There will be links to information about the methodology.

- **Statistics Explained articles:** an SE article will present summaries of the main results for the EU and Candidate Countries. ([http://ec.europa.eu/eurostat/statistics-explained/index.php/Earnings\\_statistics](http://ec.europa.eu/eurostat/statistics-explained/index.php/Earnings_statistics) )
- **Further publications:** Other dissemination of the 2018 SES results is envisaged via publications such as News Release(s) as well as the Eurostat's Yearbook. ([http://ec.europa.eu/eurostat/statistics-explained/index.php/Wages\\_and\\_labour\\_costs](http://ec.europa.eu/eurostat/statistics-explained/index.php/Wages_and_labour_costs) )

# ANNEX 1

## CODING FOR CATEGORICAL (OR ALPHANUMERIC) VARIABLES

### (variable 1.1) **GEOGRAPHICAL LOCATION OF THE STATISTICAL UNIT (LOCAL UNIT) IN NUTS-1**

Only use the **NUTS 2016** codes given here. For those Member States where the **NUTS-1** level corresponds to the national level, please use the country code.

| <b>NUTS-1 CODE</b> | <b>COUNTRY LABEL</b>   | <b>NUTS-1 LEVEL REGION LABEL</b>                                 |
|--------------------|------------------------|--|
| <b>BE</b>          | <b>BELGIQUE-BELGIË</b> |  |
| BE1                |                        | RÉGION DE BRUXELLES-CAPITALE / BRUSSELS<br>HOOFDSTEDELIJK GEWEST |
| BE2                |                        | VLAAMS GEWEST  |
| BE3                |                        | RÉGION WALLONNE  |
| <b>BG</b>          | <b>BULGARIA</b>        |  |
| BG3                |                        | SEVERNA I YUGOIZTOCHNA BULGARIA                                  |
| BG4                |                        | YUGOZAPADNA I YUZHNA TSENTRALNA BULGARIA                         |
| <b>CZ</b>          | <b>ČESKÁ REPUBLIKA</b> |  |
| CZ0                |                        | ČESKÁ REPUBLIKA  |
| <b>DK</b>          | <b>DANMARK</b>         |  |
| DK0                |                        | DANMARK  |
| <b>DE</b>          | <b>DEUTSCHLAND</b>     |  |
| DE1                |                        | BADEN-WÜRTTEMBERG  |
| DE2                |                        | BAYERN   |
| DE3                |                        | BERLIN   |
| DE4                |                        | BRANDENBURG  |
| DE5                |                        | BREMEN   |
| DE6                |                        | HAMBURG  |
| DE7                |                        | HESEN  |
| DE8                |                        | MECKLENBURG-VORPOMMERN   |
| DE9                |                        | NIEDERSACHSEN  |
| DEA                |                        | NORDRHEIN-WESTFALEN  |
| DEB                |                        | RHEINLAND-PFALZ  |
| DEC                |                        | SAARLAND   |
| DED                |                        | SACHSEN  |
| DEE                |                        | SACHSEN-ANHALT   |
| DEF                |                        | SCHLESWIG-HOLSTEIN   |
| DEG                |                        | THÜRINGEN  |
| <b>EE</b>          | <b>EESTI</b>           |  |
| EE0                |                        | EESTI  |
| <b>IE</b>          | <b>ÉIRE/IRELAND</b>    |  |
| IE0                |                        | IRELAND  |
| <b>EL</b>          | <b>ELLÁDA</b>          |  |
| EL3                |                        | ATTIKI   |

| <b>NUTS-1 CODE</b> | <b>COUNTRY LABEL</b>   | <b>NUTS-1 LEVEL REGION LABEL</b>                      |
|--------------------|------------------------|---|
| EL4                |                        | NISIA AIGAIUO, KRITI                                  |
| EL5                |                        | VOREIA ELLADA   |
| EL6                |                        | KENTRIKI ELLADA                                       |
| <b>ES</b>          | <b>ESPAÑA</b>          |   |
| ES1                |                        | NOROESTE  |
| ES2                |                        | NORESTE   |
| ES3                |                        | COMUNIDAD DE MADRID                                   |
| ES4                |                        | CENTRO (ES)   |
| ES5                |                        | ESTE  |
| ES6                |                        | SUR   |
| ES7                |                        | CANARIAS  |
| <b>FR</b>          | <b>FRANCE</b>          |   |
| FR1                |                        | ÎLE-DE-FRANCE   |
| FRB                |                        | CENTRE-VAL DE LOIRE                                   |
| FRC                |                        | BOURGOGNE- FRANCHE-COMTÉ                              |
| FRD                |                        | NORMANDIE   |
| FRE                |                        | NORD-PAS-DE- CALAIS-PICARDIE                          |
| FRF                |                        | ALSACE- CHAMPAGNE-ARDENNE- LORRAINE                   |
| FRG                |                        | PAYS-DE-LA-LOIRE                                      |
| FRH                |                        | BRETAGNE  |
| FRI                |                        | AQUITAINE- LIMOUSIN- POITOU-CHARENTES                 |
| FRJ                |                        | <b>LANGUEDOC-ROUSSILLON- MIDI-PYRÉNÉES</b>            |
| <b>FRK</b>         |                        | <b>AUVERGNE- RHÔNE-ALPES</b>                          |
| <b>FRL</b>         |                        | <b>PROVENCE-ALPES-CÔTE D'AZUR</b>                     |
| <b>FRM</b>         |                        | <b>CORSE</b>  |
| <b>FRY</b>         |                        | <b>RUP FR — RÉGIONS ULTRAPÉRIPHÉRIQUES FRANÇAISES</b> |
| <b>HR</b>          | <b>HRVATSKA</b>        |   |
| HRO                |                        | HRVATSKA  |
| <b>IT</b>          | <b>ITALIA</b>          |   |
| ITC                |                        | NORD-OVEST  |
| ITF                |                        | SUD   |
| ITG                |                        | ISOLE   |
| ITH                |                        | NORD-EST  |
| ITI                |                        | CENTRO (IT)   |
| <b>CY</b>          | <b>KYPROS / KIBRIS</b> |   |
| CY0                |                        | KYPROS  |
| <b>LV</b>          | <b>LATVIJA</b>         |   |
| LVO                |                        | LATVIJA   |
| <b>LT</b>          | <b>LIETUVA</b>         |   |
| LT0                |                        | LIETUVA   |
| <b>LU</b>          | <b>LUXEMBOURG</b>      |   |
| LU0                |                        | LUXEMBOURG  |
| <b>HU</b>          | <b>MAGYARORSZÁG</b>    |   |
| HU1                |                        | KÖZÉP-MAGYARORSZÁG                                    |
| HU2                |                        | DUNÁNTÚL  |
| HU3                |                        | ALFÖLD ÉS ÉSZAK                                       |
| <b>MT</b>          | <b>MALTA</b>           |   |
| MT0                |                        | MALTA   |
| <b>NL</b>          | <b>NEDERLAND</b>       |   |
| NL1                |                        | NOORD-NEDERLAND                                       |



| <b>NUTS-1 CODE</b> | <b>COUNTRY LABEL</b>   | <b>NUTS-1 LEVEL REGION LABEL</b>           |
|--------------------|------------------------|--|
| NL2                |                        | OOST-NEDERLAND                             |
| NL3                |                        | WEST-NEDERLAND                             |
| NL4                |                        | ZUID-NEDERLAND                             |
| <b>AT</b>          | <b>ÖSTERREICH</b>      |  |
| AT1                |                        | OSTÖSTERREICH                              |
| AT2                |                        | SÜDÖSTERREICH                              |
| AT3                |                        | WESTÖSTERREICH                             |
| <b>PL</b>          | <b>POLSKA</b>          |  |
| PL2                |                        | MAKROREGION POŁUDNIOWY                     |
| PL4                |                        | MAKROREGION PÓŁNOCNO-ZACHODNI              |
| PL5                |                        | MAKROREGION POŁUDNIOWO-ZACHODNI            |
| PL6                |                        | MAKROREGION PÓŁNOCNY                       |
| PL7                |                        | MAKROREGION CENTRALNY                      |
| PL8                |                        | MAKROREGION WSCHODNI                       |
| <b>PL9</b>         |                        | <b>MAKROREGION WOJEWÓDZTWO MAZOWIECKIE</b> |
| <b>PT</b>          | <b>PORTUGAL</b>        |  |
| PT1                |                        | CONTINENTE                                 |
| PT2                |                        | REGIÃO AUTÓNOMA DOS AÇORES                 |
| PT3                |                        | REGIÃO AUTÓNOMA DA MADEIRA                 |
| <b>RO</b>          | <b>ROMÂNIA</b>         |  |
| RO1                |                        | MACROREGIUNEA UNU                          |
| RO2                |                        | MACROREGIUNEA DOI                          |
| RO3                |                        | MACROREGIUNEA TREI                         |
| RO4                |                        | MACROREGIUNEA PATRU                        |
| <b>SI</b>          | <b>SLOVENIJA</b>       |  |
| SI0                |                        | SLOVENIJA                                  |
| <b>SK</b>          | <b>SLOVENSKO</b>       |  |
| SK0                |                        | SLOVENSKO                                  |
| <b>FI</b>          | <b>SUOMI / FINLAND</b> |  |
| FI1                |                        | MANNER-SUOMI                               |
| FI2                |                        | ÅLAND                                      |
| <b>SE</b>          | <b>SVERIGE</b>         |  |
| SE1                |                        | ÖSTRA SVERIGE                              |
| SE2                |                        | SÖDRA SVERIGE                              |
| SE3                |                        | NORRA SVERIGE                              |
| <b>UK</b>          | <b>UNITED KINGDOM</b>  |  |
| UKC                |                        | NORTH EAST (ENGLAND)                       |
| UKD                |                        | NORTH WEST (ENGLAND)                       |
| UKE                |                        | YORKSHIRE AND THE HUMBER                   |
| UKF                |                        | EAST MIDLANDS (ENGLAND)                    |
| UKG                |                        | WEST MIDLANDS (ENGLAND)                    |
| UKH                |                        | EAST OF ENGLAND                            |
| UKI                |                        | LONDON                                     |
| UKJ                |                        | SOUTH EAST (ENGLAND)                       |
| UKK                |                        | SOUTH WEST (ENGLAND)                       |
| UKL                |                        | WALES                                      |
| UKM                |                        | SCOTLAND                                   |
| UKN                |                        | NORTHERN IRELAND                           |
| <b>IS</b>          | <b>ÍSLAND</b>          |  |

| <b>NUTS-1 CODE</b> | <b>COUNTRY LABEL</b>                                | <b>NUTS-1 LEVEL REGION LABEL</b>             |
|--------------------|---|--|
| ISO                |   | ÍSLAND                                       |
| <b>LI</b>          | <b>LIECHTENSTEIN</b>                                |  |
| LI0                |   | LIECHTENSTEIN                                |
| <b>NO</b>          | <b>NORGE</b>  |  |
| NO0                |   | NORGE  |
| <b>CH</b>          | <b>SCHWEIZ / SUISSE / SVIZZERA</b>                  |  |
| CH0                |   | SCHWEIZ / SUISSE / SVIZZERA                  |
|                    |   |  |
| <b>MK</b>          | <b>PORANEŠNA JUGOSLOVENSKA REPUBLIKA MAKEDONIJA</b> |  |
| MK0                |   | PORANEŠNA JUGOSLOVENSKA REPUBLIKA MAKEDONIJA |
| <b>TR</b>          | <b>TÜRKİYE</b>                                      |  |
| TR1                |   | İSTANBUL                                     |
| <b>TR2</b>         |   | <b>BATI MARMARA</b>                          |
| <b>TR3</b>         |   | <b>EGE</b>                                   |
| <b>TR4</b>         |   | <b>DOĞU MARMARA</b>                          |
| <b>TR5</b>         |   | <b>BATI ANADOLU</b>                          |
| <b>TR6</b>         |   | <b>AKDENİZ</b>                               |
| <b>TR7</b>         |   | <b>ORTA ANADOLU</b>                          |
| <b>TR8</b>         |   | <b>BATI KARADENİZ</b>                        |
| <b>TR9</b>         |   | <b>DOĞU KARADENİZ</b>                        |
| <b>TRA</b>         |   | <b>KUZEYDOĞU ANADOLU</b>                     |
| <b>TRB</b>         |   | <b>ORTADOĞU ANADOLU</b>                      |
| <b>TRC</b>         |   | <b>GÜNEYDOĞU ANADOLU</b>                     |
| <b>ME</b>          | <b>CRNA GORA</b>                                    |  |
| ME0                |   | CRNA GORA                                    |
| <b>RS</b>          | <b>REPUBLIKA SRBIJA</b>                             |  |
| RS0                |   | REPUBLIKA SRBIJA                             |

## **(variable 1.2) Size of enterprise to which the local unit belongs**

|                 |                        |
|-----------------|------------------------|
| <b>E1_9</b>     | under 10 employees     |
| <b>E10_49</b>   | 10-49 employees        |
| <b>E50_249</b>  | 50-249 employees       |
| <b>E250_499</b> | 250-499 employees      |
| <b>E500_999</b> | 500-999 employees      |
| <b>E1000</b>    | 1000 or more employees |

## (variable 1.3) Principal economic activity of the local unit (Nace rev.2)

Use **ONLY** the **2-digit** NACE codes below. 1 or 3-digit codes will not be accepted.

| Economic activity of the local unit |  | CODE |
|-------------------------------------|--|------|
| B                                   | MINING AND QUARRYING   |      |
| 5                                   | Mining of coal and lignite   | X05  |
| 6                                   | Extraction of crude petroleum and natural gas  | X06  |
| 7                                   | Mining of metal ores   | X07  |
| 8                                   | Other mining and quarrying   | X08  |
| 9                                   | Mining support service activities  | X09  |
|                                     |  |      |
| C                                   | MANUFACTURING  |      |
| 10                                  | Manufacture of food products   | X10  |
| 11                                  | Manufacture of beverages   | X11  |
| 12                                  | Manufacture of tobacco products  | X12  |
| 13                                  | Manufacture of textiles  | X13  |
| 14                                  | Manufacture of wearing apparel   | X14  |
| 15                                  | Manufacture of leather and related products  | X15  |
| 16                                  | Manufacture of wood and of products of wood and cork, except furniture;<br>manufacture of articles of straw and plaiting materials | X16  |
| 17                                  | Manufacture of paper and paper products  | X17  |
| 18                                  | Printing and reproduction of recorded media  | X18  |
| 19                                  | Manufacture of coke and refined petroleum products   | X19  |
| 20                                  | Manufacture of chemicals and chemical products   | X20  |
| 21                                  | Manufacture of basic pharmaceutical products and pharmaceutical preparations   | X21  |
| 22                                  | Manufacture of rubber and plastic products   | X22  |
| 23                                  | Manufacture of other non-metallic mineral products   | X23  |
| 24                                  | Manufacture of basic metals  | X24  |
| 25                                  | Manufacture of fabricated metal products, except machinery and equipment   | X25  |
| 26                                  | Manufacture of computer, electronic and optical products   | X26  |
| 27                                  | Manufacture of electrical equipment  | X27  |
| 28                                  | Manufacture of machinery and equipment n.e.c.  | X28  |
| 29                                  | Manufacture of motor vehicles, trailers and semi-trailers  | X29  |
| 30                                  | Manufacture of other transport equipment   | X30  |
| 31                                  | Manufacture of furniture   | X31  |
| 32                                  | Other manufacturing  | X32  |
| 33                                  | Repair and installation of machinery and equipment   | X33  |
|                                     |  |      |
| D                                   | ELECTRICITY, GAS, STEAM AND AIR CONDITIONING SUPPLY  |      |
| 35                                  | Electricity, gas, steam and air conditioning supply  | X35  |
|                                     |  |      |
| E                                   | WATER SUPPLY; SEWERAGE, WASTE MANAGEMENT AND REMEDIATION ACTIVITIES  |      |
| 36                                  | Water collection, treatment and supply   | X36  |
| 37                                  | Sewerage   | X37  |
| 38                                  | Waste collection, treatment and disposal activities; materials recovery  | X38  |
| 39                                  | Remediation activities and other waste management services   | X39  |

|    |  |     |
|----|--|-----|
| F  | CONSTRUCTION   |     |
| 41 | Construction of buildings  | X41 |
| 42 | Civil engineering  | X42 |
| 43 | Specialised construction activities  | X43 |
|    |  |     |
| G  | WHOLESALE AND RETAIL TRADE; REPAIR OF MOTOR VEHICLES AND MOTORCYCLES                                       |     |
| 45 | Wholesale and retail trade and repair of motor vehicles and motorcycles                                    | X45 |
| 46 | Wholesale trade, except of motor vehicles and motorcycles  | X46 |
| 47 | Retail trade, except of motor vehicles and motorcycles   | X47 |
|    |  |     |
| H  | TRANSPORTATION AND STORAGE   |     |
| 49 | Land transport and transport via pipelines   | X49 |
| 50 | Water transport  | X50 |
| 51 | Air transport  | X51 |
| 52 | Warehousing and support activities for transportation  | X52 |
| 53 | Postal and courier activities  | X53 |
|    |  |     |
| I  | ACCOMMODATION AND FOOD SERVICE ACTIVITIES  |     |
| 55 | Accommodation  | X55 |
| 56 | Food and beverage service activities   | X56 |
|    |  |     |
| J  | INFORMATION AND COMMUNICATION  |     |
| 58 | Publishing activities  | X58 |
| 59 | Motion picture, video and television programme production, sound recording and music publishing activities | X59 |
| 60 | Programming and broadcasting activities  | X60 |
| 61 | Telecommunications   | X61 |
| 62 | Computer programming, consultancy and related activities   | X62 |
| 63 | Information service activities   | X63 |
|    |  |     |
| K  | FINANCIAL AND INSURANCE ACTIVITIES   |     |
| 64 | Financial service activities, except insurance and pension funding   | X64 |
| 65 | Insurance, reinsurance and pension funding, except compulsory social security                              | X65 |
| 66 | Activities auxiliary to financial services and insurance activities  | X66 |
|    |  |     |
| L  | REAL ESTATE ACTIVITIES   |     |
| 68 | Real estate activities   | X68 |
|    |  |     |
| M  | PROFESSIONAL, SCIENTIFIC AND TECHNICAL ACTIVITIES  |     |
| 69 | Legal and accounting activities  | X69 |
| 70 | Activities of head offices; management consultancy activities  | X70 |
| 71 | Architectural and engineering activities; technical testing and analysis                                   | X71 |
| 72 | Scientific research and development  | X72 |
| 73 | Advertising and market research  | X73 |
| 74 | Other professional, scientific and technical activities  | X74 |
| 75 | Veterinary activities  | X75 |
|    |  |     |
| N  | ADMINISTRATIVE AND SUPPORT SERVICE ACTIVITIES  |     |
| 77 | Rental and leasing activities  | X77 |
| 78 | Employment activities  | X78 |
| 79 | Travel agency, tour operator and other reservation service and related activities                          | X79 |
| 80 | Security and investigation activities  | X80 |
| 81 | Services to buildings and landscape activities   | X81 |
| 82 | Office administrative, office support and other business support activities                                | X82 |

|    |   |     |
|----|---|-----|
|    | PUBLIC ADMINISTRATION AND DEFENCE; COMPULSORY SOCIAL SECURITY |     |
| 84 | Public administration and defence; compulsory social security | X84 |
|    |   |     |
| P  | education   |     |
| 85 | Education   | X85 |
|    |   |     |
| Q  | HUMAN HEALTH AND SOCIAL WORK ACTIVITIES                       |     |
| 86 | Human health activities                                       | X86 |
| 87 | Residential care activities                                   | X87 |
| 88 | Social work activities without accommodation                  | X88 |
|    |   |     |
| R  | ARTS, ENTERTAINMENT AND RECREATION                            |     |
| 90 | Creative, arts and entertainment activities                   | X90 |
| 91 | Libraries, archives, museums and other cultural activities    | X91 |
| 92 | Gambling and betting activities                               | X92 |
| 93 | Sports activities and amusement and recreation activities     | X93 |
|    |   |     |
| S  | OTHER SERVICE ACTIVITIES                                      |     |
| 94 | Activities of membership organisations                        | X94 |
| 95 | Repair of computers and personal and household goods          | X95 |
| 96 | Other personal service activities                             | X96 |

### **(variable 1.4) Form of economic and financial control of enterprise**

- A public control
- B private control

### **(variable 1.5) Collective pay agreement**

- A national level or interconfederal agreement
- B industry agreement
- C agreement for individual industries in individual regions
- D enterprise or single employer agreement
- E agreement applying only to workers in the local unit
- F any other type of agreement
- N no collective agreement exists

### **(variable 1.7) *Optional: Affiliation of the local unit to a group of enterprises***

- Y Yes
- N No

### **(variable 2.1) Sex**

Female

Male

## **(variable 2.3) Occupation in the reference month (ISCO-08)**

### **Major Group 1: Managers**

- 11 Chief executives, senior officials and legislators
  - 111 Legislators and senior officials
  - 112 Managing directors and chief executives
- 12 Administrative and commercial managers
  - 121 Business services and administration managers
  - 122 Sales, marketing and development managers
- 13 Production and specialised services managers
  - 131 Production managers in agriculture, forestry and fisheries
  - 132 Manufacturing, mining, construction, and distribution managers
  - 133 Information and communications technology service managers
  - 134 Professional services managers
- 14 Hospitality, retail and other services managers
  - 141 Hotel and restaurant managers
  - 142 Retail and wholesale trade managers
  - 143 Other services managers

### **Major Group 2: Professionals**

- 21 Science and engineering professionals
  - 211 Physical and earth science professionals
  - 212 Mathematicians, actuaries and statisticians
  - 213 Life science professionals
  - 214 Engineering professionals (excluding electrotechnology)
  - 215 Electrotechnology engineers
  - 216 Architects, planners, surveyors and designers
- 22 Health professionals
  - 221 Medical doctors
  - 222 Nursing and midwifery professionals
  - 223 Traditional and complementary medicine professionals
  - 224 Paramedical practitioners
  - 225 Veterinarians
  - 226 Other health professionals
- 23 Teaching professionals
  - 231 University and higher education teachers
  - 232 Vocational education teachers
  - 233 Secondary education teachers
  - 234 Primary school and early childhood teachers
  - 235 Other teaching professionals
- 24 Business and administration professionals
  - 241 Finance professionals
  - 242 Administration professionals
  - 243 Sales, marketing and public relations professionals
- 25 Information and communications technology professionals
  - 251 Software and applications developers and analysts
  - 252 Database and network professionals
- 26 Legal, social and cultural professionals

- 261 Legal professionals
- 262 Librarians, archivists and curators
- 263 Social and religious professionals
- 264 Authors, journalists and linguists
- 265 Creative and performing artists

**Major Group 3: Technicians and associate professionals**

- 31 Science and engineering associate professionals
  - 311 Physical and engineering science technicians
  - 312 Mining, manufacturing and construction supervisors
  - 313 Process control technicians
  - 314 Life science technicians and related associate professionals
  - 315 Ship and aircraft controllers and technicians
- 32 Health associate professionals
  - 321 Medical and pharmaceutical technicians
  - 322 Nursing and midwifery associate professionals
  - 323 Traditional and complementary medicine associate professionals
  - 324 Veterinary technicians and assistants
  - 325 Other health associate professionals
- 33 Business and administration associate professionals
  - 331 Financial and mathematical associate professionals
  - 332 Sales and purchasing agents and brokers
  - 333 Business services agents
  - 334 Administrative and specialised secretaries
  - 335 Regulatory government associate professionals
- 34 Legal, social, cultural and related associate professionals
  - 341 Legal, social and religious associate professionals
  - 342 Sports and Fitness Workers
  - 343 Artistic, cultural and culinary associate professionals
- 35 Information and communications technicians
  - 351 Information and communications technology operations and user support technicians
  - 352 Telecommunications and broadcasting technicians

**Major Groups 4: Clerical support workers**

- 41 General and keyboard clerks
  - 411 General office clerks
  - 412 Secretaries (general)
  - 413 Keyboard operators
- 42 Customer services clerks
  - 421 Tellers, money collectors and related clerks
  - 422 Client information workers
- 43 Numerical and material recording clerks
  - 431 Numerical clerks
  - 432 Material-recording and transport clerks
- 44 Other clerical support workers
  - 441 Other clerical support workers

**Major Group 5: Service and sales workers**

- 51 Personal service workers
  - 511 Travel attendants, conductors and guides
  - 512 Cooks
  - 513 Waiters and bartenders
  - 514 Hairdressers, beauticians and related workers
  - 515 Building and housekeeping supervisors
  - 516 Other personal services workers
- 52 Sales workers
  - 521 Street and market salespersons
  - 522 Shop salespersons
  - 523 Cashiers and ticket clerks
  - 524 Other sales workers
- 53 Personal care workers
  - 531 Child care workers and teachers' aides
  - 532 Personal care workers in health services
- 54 Protective services workers
  - 541 Protective services workers

**Major Group 6: Skilled agricultural, forestry and fishery workers**

- 61 Market-oriented skilled agricultural workers
  - 611 Market gardeners and crop growers
  - 612 Animal producers
  - 613 Mixed crop and animal producers
- 62 Market-oriented skilled forestry, fishery and hunting workers
  - 621 Forestry and related workers
  - 622 Fishery Workers, Hunters and Trappers
- 63 Subsistence farmers, fishers, hunters and gatherers
  - 631 Subsistence crop farmers
  - 632 Subsistence livestock farmers
  - 633 Subsistence mixed crop and livestock farmers
  - 634 Subsistence fishers, hunters, trappers and gatherers

**Major Group 7: Craft and related trades workers**

- 71 Building and related trades workers, excluding electricians
  - 711 Building frame and related trades workers
  - 712 Building finishers and related trades workers
  - 713 Painters, building structure cleaners and related trades workers
- 72 Metal, machinery and related trades workers
  - 721 Sheet and structural metal workers, moulders and welders, and related workers
  - 722 Blacksmiths, toolmakers and related trades workers
  - 723 Machinery mechanics and repairers
- 73 Handicraft and printing workers
  - 731 Handicraft workers
  - 732 Printing trades workers
- 74 Electrical and electronic trades workers
  - 741 Electrical equipment installers and repairers
  - 742 Electronics and telecommunications installers and repairers



- 75 Food processing, wood working, garment and other craft and related trades workers
  - 751 Food processing and related trades workers
  - 752 Wood treaters, cabinet-makers and related trades workers
  - 753 Garment and related trades workers
  - 754 Other craft and related workers

**Major Group 8: Plant and machine operators and assemblers**

- 81 Stationary plant and machine operators
  - 811 Mining and mineral processing plant operators
  - 812 Metal processing and finishing plant operators
  - 813 Chemical and photographic products plant and machine operators
  - 814 Rubber, plastic and paper products machine operators
  - 815 Textile, fur and leather products machine operators
  - 816 Food and related products machine operators
  - 817 Wood processing and papermaking plant operators
  - 818 Other stationary plant and machine operators
- 82 Assemblers
  - 821 Assemblers
- 83 Drivers and mobile plant operators
  - 831 Locomotive engine drivers and related workers
  - 832 Car, van and motorcycle drivers
  - 833 Heavy truck and bus drivers
  - 834 Mobile plant operators
  - 835 Ships' deck crews and related workers

**Major Group 9: Elementary occupations**

- 91 Cleaners and helpers
  - 911 Domestic, hotel and office cleaners and helpers
  - 912 Vehicle, window, laundry and other hand cleaning workers
- 92 Agricultural, forestry and fishery labourers
  - 921 Agricultural, forestry and fishery labourers
- 93 Labourers in mining, construction, manufacturing and transport
  - 931 Mining and construction labourers
  - 932 Manufacturing labourers
  - 933 Transport and storage labourers
- 94 Food preparation assistants
  - 941 Food preparation assistants
- 95 Street and related sales and service workers
  - 951 Street and related service workers
  - 952 Street vendors (excluding food)
- 96 Refuse workers and other elementary workers
  - 961 Refuse workers
  - 962 Other Elementary Workers

**Major Group 0: Armed forces occupations**

- 01 Commissioned armed forces officers
  - 011 Commissioned armed forces officers

- 02 Non-commissioned armed forces officers
  - 021 Non-commissioned armed forces officers
- 03 Armed forces occupations, other ranks
  - 031 Armed forces occupations, other ranks

### **(variable 2.4) *Optional: Managerial or supervisory position***

- Y** Yes (the employee has some form of management function)
- N** No

### **(variable 2.5) Highest successfully completed level of education and training (ISCED 2011)**

**ONLY** the (4) main group codes (**G1 – G4**) are to be provided to Eurostat

- G1** Group 1: Basic education
  - 0 Less than primary
  - 1 Primary
  - 2 Lower secondary
- G2** Group 2: Secondary education
  - 3 Upper secondary
  - 4 Post-secondary (non-tertiary)
- G3** Group 3: Tertiary education (up to 4 years)
  - 5 Short-cycle tertiary
  - 6 Bachelor or equivalent
- G4** Group 4: Tertiary education (more than 4 years)
  - 7 Master or equivalent
  - 8 Doctoral or equivalent

### **(variable 2.7) Contractual working time (full-time or part-time)**

- FT** full-time employee
- PT** part-time employee

## **(variable 2.8) type of employment contract**

- A indefinite duration
- B temporary/fixed duration (except apprentice)
- C apprentice

## **(variable 2.9) *Optional: Citizenship and residence***

- A resident with national citizenship
- B resident with foreign citizenship
- C non-resident (commuter from another country) with national citizenship
- D non-resident (commuter from another country) with foreign citizenship

## ANNEX 2

- ✓ Council Regulation (EC) No 530/1999 of 9 March 1999 concerning structural statistics on earnings and on labour costs  
<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31999R0530&qid=1495187130574&from=EN> )
  
- ✓ Commission Regulation (EC) No 1738/2005 of 21 October 2005 amending Regulation (EC) No 1916/2000 as regards the definition and transmission of information on the structure of earnings  
<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32005R1738&qid=1495187155710&from=EN> )
  
- ✓ Commission Regulation (EC) No 698/2006 of 5 May 2006 implementing Council Regulation (EC) No 530/1999 as regards quality evaluation of structural statistics on labour costs and earnings  
<http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32006R0698&qid=1495187181306&from=EN> )